at1110paper_practice_test (v50)

1. Solve the equation.

$$(3x + 2)(7x + 5) = 0$$

$$x = \frac{-2}{3} \qquad x = \frac{-5}{7}$$

2. Expand the following expression into standard form.

$$(3x + 7)^2$$

$$9x^2 + 21x + 21x + 49$$

$$9x^2 + 42x + 49$$

3. Solve the equation.

$$10x^2 + 22x + 22 = 5x^2 + 3x + 4$$

$$5x^2 + 19x + 18 = 0$$

$$(5x + 9)(x + 2) = 0$$

$$x = \frac{-9}{5} \qquad x = -2$$

4. Expand the following expression into standard form.

$$(5x + 6)(5x - 6)$$

$$25x^2 - 30x + 30x - 36$$

$$25x^2 - 36$$

5. Factor the expression.
$$9x^2 - 64$$

$$(3x + 8)(3x - 8)$$

6. Expand the following expression into standard form.
$$(9x - 4)(5x + 3)$$

$$45x^2 + 27x - 20x - 12$$
$$45x^2 + 7x - 12$$

7. Solve the equation with factoring by grouping.
$$15x^2 - 10x + 12x - 8 \ = \ 0$$

$$(5x + 4)(3x - 2) = 0$$
$$x = \frac{-4}{5} \qquad x = \frac{2}{3}$$

8. Factor the expression.
$$x^2 + 6x + 8$$

$$(x + 4)(x + 2)$$